<u>Amendments to the Claims:</u>

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims:</u>

1-32 (cancelled).

33 (currently amended). A system ~~of software components executed by one or more computers~~ <u>for color mapping</u>, the system comprising:

<u>a source device capable of producing an image from image data using a source device profile;</u>

<u>a destination device capable of reproducing said image from the image data using a destination device profile; and</u>

<u>a computer system operatively connecting said source device and destination device, said computer system including:</u>

a source device profile interpreter that interprets ~~a~~ <u>the</u> source device profile to convert coordinates in a source device color space to a device-independent color space;

a destination device profile interpreter that interprets ~~a~~ <u>the</u> destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

a color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences<u>, said user preferences being</u> specified by a user ~~independently of the source and destination device profiles~~ <u>to configure the color transformer</u>, wherein the user preferences include color conversion preferences,

wherein the color transformer generates the color map in part by reducing color error between ~~the~~ <u>said</u> converted coordinates from the source and destination device profile interpreters, <u>the color transformer, in said reducing, at least adjusting coordinates in the destination device color space to generate adjusted coordinates, the color map being based in part on said adjusted coordinates in the destination device color space, and</u>

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wherein the source and destination device profile interpreters use forward transformation profiles to produce ~~the~~ said converted coordinates~~, and the color transformer at least adjusts coordinates, thereby generating adjusted coordinates, in the destination device color space to reduce the color error, the color map being based in part on the adjusted coordinates in the destination device color space~~.

34 (currently amended). A system ~~of software components executed by one or more computers~~ for color mapping , the system comprising:

a source device capable of producing an image from image data using a source device profile:

a destination device capable of reproducing said image from the image data using a destination device profile: and

a computer system operatively connecting said source device and destination device, said computer system including:

a source device profile interpreter that interprets ~~a~~ the source device profile to convert coordinates in a source device color space to a device-independent color space;

a destination device profile interpreter that interprets ~~a~~ the destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

a color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles, wherein the user preferences include color conversion preferences, wherein the source device profile ~~contains raw spectral data that~~ characterizes a source device and contains raw spectral data used to construct said source device profile, and the destination device profile ~~contains raw spectral data that~~ characterizes a destination device and contains raw spectral data used to construct said destination device profile.

35 (currently amended). A system ~~of software components executed by one or more computers~~ for color mapping , the system comprising:

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a source device capable of producing an image from image data using a source device profile;

a destination device capable of reproducing said image from the image data using a destination device profile; and

a computer system operatively connecting said source device and destination device, said computer system including:

a source device profile interpreter that interprets a the source device profile to convert coordinates in a source device color space to a device-independent color space;

a destination device profile interpreter that interprets a the destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

a color transformer that generates a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences, said user preferences being specified by a user independently of the source and destination device profiles, ;

wherein the user preferences include color conversion preferences, ;

wherein the source device profile defines a forward transformation from the source device color space to the device-independent color space, ; and

wherein the destination device profile defines a forward transformation from the destination device color space to the device-independent color space.

36 (currently amended). The system of claim 33, wherein the color map includes is a look-up table.

37 (currently amended). The system of claim 33, wherein the color map includes is a mathematical expression.

38-46 (cancelled).

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47 (currently amended).   A system ~~of software components executed by one or more computers~~ for color mapping , the system comprising:

a source device capable of producing an image from image data using a source device profile;

a destination device capable of reproducing said image from the image data using a destination device profile; and

a computer system operatively connecting said source device and destination device, said computer system being programmed to include:

means for interpreting a source device profile to convert coordinates in a source device color space to a device-independent color space;

means for interpreting a destination device profile to convert coordinates in a destination device color space to the device-independent color space; and

means for generating a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles, wherein the user preferences include color conversion preferences,

wherein the means for generating a color map generates the color map in part by reducing color error between ~~the~~ said converted coordinates from the source and destination device profile interpreters, said reducing at least adjusting coordinates in the destination device color space, the color map being based in part on said adjusted coordinates in the destination device color space; and

wherein the means for interpreting the source and destination device profiles use forward transformation profiles to produce the converted coordinates~~, and the means for generating a color map at least adjusts coordinates, thereby generating adjusted coordinates, in the destination device color space to reduce the color error, the color map being based in part on the adjusted coordinates in the destination device color space~~.

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48 (currently amended). The system of claim 47, wherein ~~the user preferences~~ said source and destination device profile interpreters are configured to include illuminant functions.

49 (currently amended). The system of claim 47, wherein ~~the user preferences~~ said source and destination device profile interpreters are configured to include observer functions.

50 (previously presented). The system of claim 47, wherein the means for generating a color map adjusts the means for interpreting the source and destination device profiles based on the user preferences.

51 (currently amended). A method implemented, at least in part, by one or more computers, the method comprising:
producing an image from image data using a source device profile; and
reproducing said image from the image data using a destination device profile;
wherein said reproducing further comprises:
interpreting ~~a~~ the source device profile to convert coordinates in a source device color space to a device-independent color space;
interpreting ~~a~~ the destination device profile to convert coordinates in a destination device color space to the device-independent color space; ~~and~~
generating a color map defining a relationship between the source and destination device color spaces based on the converted coordinates and user preferences specified by a user independently of the source and destination device profiles, wherein the user preferences include color conversion preferences~~,~~; and
using the color map to map colors between an image produced by a source device having said source device profile and a reproduction of said image produced by a destination device having said destination device profile;

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wherein generating a color map includes generating the color map in part by reducing color error between the converted coordinates from the source and destination device profile interpreters, <u>said reducing at least adjusting coordinates in the destination device color space, the color map being based in part on said adjusted coordinates in the destination device color space; and</u>

<u>wherein</u> interpreting the source and destination device profiles includes using forward transformation profiles to produce the converted coordinates~~, and generating a color map includes at least adjusting coordinates, thereby generating adjusted coordinates, in the destination device color space to reduce the color error, the color map being based in part on the adjusted coordinates in the destination device color space~~.

52 (currently amended). The system of claim 51, wherein ~~the user preferences~~ <u>said source and destination device profile interpreters are configured to</u> include illuminant functions.

53 (currently amended). The system of claim 51, wherein ~~the user preferences~~ <u>said source and destination device profile interpreters are configured to</u> include observer functions.

54-59 (cancelled).

60 (currently amended). The system of claim 33, wherein ~~the user preferences~~ <u>said source and destination device profile interpreters are configured to</u> include illuminant functions.

61 (currently amended). The system of claim 33, wherein ~~the user preferences~~ <u>said source and destination device profile interpreters are configured to</u> include observer functions.

62-63 (cancelled).

64 (currently amended). The system of claim 33, wherein the source and destination device profile interpreters are configured ~~based on~~ to include white- and black-point parameters to account for color variations between media and colorants used by different color display devices.

65-66 (cancelled).

67 (currently amended). The system of claim 35, wherein the source and destination device profile interpreters are configured ~~based on~~ to include white- and black-point parameters to account for color variations between media and colorants used by different color display devices.